

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference <b>240 690</b>	<b>FOR FURTHER ACTION</b>		See item 4 below
International application No. <b>PCT/EP2004/013108</b>	International filing date ( <i>day/month/year</i> ) <b>18 November 2004 (18.11.2004)</b>	Priority date ( <i>day/month/year</i> ) <b>21 November 2003 (21.11.2003)</b>	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant <b>SULT GMBH</b>			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).
2. This REPORT consists of a total of 7 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input type="checkbox"/> Box No. II	Priority
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/> Box No. VII	Certain defects in the international application
<input type="checkbox"/> Box No. VIII	Certain observations on the international application

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis.2).

Date of issuance of this report <b>29 August 2006 (29.08.2006)</b>
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The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. +41 22 338 82 70	Authorized officer  <b>Ellen Moyse</b> e-mail: pt05@wipo.int
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**PATENT COOPERATION TREATY**

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:	
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**PCT**

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

(PCT Rule 43bis.1)

**See form PCT/ISA/210**

Applicant's or agent's file reference <b>240 690</b>		Date of mailing (day/month/year)
International application No. <b>PCT/EP2004/013108</b>	International filing date (day/month/year) <b>18.11.2004</b>	Priority date (day/month/year) <b>21.11.2003</b>
International Patent Classification (IPC) or both national classification and IPC <b>H02K33/18, H02K41/035, B07C5/344</b>		
Applicant <b>SULT GMBH</b>		

1. This opinion contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the opinion
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP	Authorized officer
Facsimile No.	Telephone No.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

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Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
 This opinion has been established on the basis of a translation from the original language into the following language  
which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
 a sequence listing  
 table(s) related to the sequence listing
  - b. format of material  
 in written format  
 in computer readable form
  - c. time of filing/furnishing  
 contained in the international application as filed.  
 filed together with the international application in computer readable form.  
 furnished subsequently to this Authority for the purposes of search.
3.  In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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International application No:  
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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability:  
citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-26	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-26	NO
Industrial applicability (IA)	Claims	1-26	YES
	Claims		NO

2. Citations and explanations:

1) Reference is made to the following documents:

D1: GB 1 428 611 A (WEIMAR-KOMBINAT VEB) 17 March 1976  
(1976-03-17)

D2: DE 198 58 548 A1 (W. SCHLAFHORST AG & CO) 21 June 2000  
(2000-06-21)

D3: US 2 587 686 A (BERRY ROBERT R) 4 March 1952 (1952-03-04)

D4: US 5 621 591 A (RAHIMI ET AL) 15 April 1997 (1997-04-15)

D5: DE 22 43 338 A1 (BERNHARD BEUMER MASCHINENFABRIK KG,  
4720 BECKUM) 7 March 1974 (1974-03-07)

D6: US 5 486 965 A (YOSHIDA ET AL) 23 January 1996 (1996-01-23)

2) INDEPENDENT CLAIM 1

The present application fails to comply with the requirements of PCT Article 33(1) since the subject matter of claim 1 does not involve an inventive step within the meaning of PCT Article 33(3).

Document D1 is considered the prior art closest to the subject matter of claim 1. It discloses (references in

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Box No. V **Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

(parentheses refer to this document)

a sorting device (1) for sorting different materials, comprising a conveyor belt (1) and at least one sensor (3) that is allocated to the conveyor belt (1) and detects pieces of material according to the location thereof on the conveyor belt (1), and at least one regulating unit (6), which separates pieces of material detected by the at least one sensor (3) according to their location, wherein an electromagnetic regulating unit (6) is used, which comprises at least one coil (12) to which voltage can be supplied, thereby causing the coil (12) to effect a regulating process for separating pieces of material by displacing an ejector part (11) from a basic position to a second position (see fig. 1).

The subject matter of claim 1 thus differs from that known from D1 in that the displaceable part of the regulating unit comprises the at least one coil, the stator element of the regulating unit comprises two or more pairs of permanent magnets magnetised in opposite directions, and the basic position and the second position of the coil are each located between one of the permanent magnet pairs.

The problem addressed by the present invention can be considered to be reducing the length of the axle and the corresponding motor size of the regulating unit.

The solution proposed in claim 1 of the present application cannot be considered inventive (PCT Article 33(3)) for the following reasons:

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Box No. V      **Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

From the known motors a person skilled in the art would choose the type with the shortest axle length (see D2). Therefore, the solution proposed in independent claim 1 cannot be considered inventive (PCT Article 33(3)).

3) DEPENDENT CLAIMS 2-26

Claims 2-26 do not contain any features which, in combination with the features of any of the claims to which they refer, meet the PCT requirements with regard to novelty or inventive step.

The choice of material for the permanent magnets, a multiplication of the active parts, i.e. coil and magnets (see D4), or the size of the permanent magnets (see D4) are merely an accumulation of features without synergetic or unexpected effect.

Furthermore, a person skilled in the art would, without thereby being inventive, use stranded wire for motor feed lines of a length corresponding to a multiple of the direct connection path if flexibility is required.

4) CLARITY

Claim 1 fails to comply with the requirements of PCT Article 6 since the subject matter of the protection sought is not clearly defined. The claim attempts to define the subject matter in terms of the result to be achieved ["[...] effects a regulating process for separating pieces of material with the aid of a rotational movement of the coil"], but in so doing merely states the problem to be solved without providing the technical features required for achieving that result (ejector part (15)).

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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement